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10/588,538

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EXAMINER

PAIK, SANG YEOP

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/588,538  
Filing Date: August 07, 2006  
Appellant(s): MEIER, REINHOLD

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William C. Gehris  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 1/14/2011 appealing from the Office action mailed 6/15/2010.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims 6 and 8-11 are rejected and pending in the application.

**(4) Status of Amendments After Final**

The finality of office action of 12/08/2009 had been reconsidered and was withdrawing in light of new ground of rejection. Subsequently, a non-final office action has been issued on 9/15/2010 from which the applicant has filed an appeal therefrom.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

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subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

### **(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

### **(8) Evidence Relied Upon**

2004/0169022	Mega et al	09-2004
2,662,277	Stone	12-1953
2,288,433	Boetcher et al	06-1942
5,245,155	Pratt et al	09-1993
2004/0191064	Guo	09-2004
2,492,833	Baumann	12-1949
2,200,287	Lysholm	05-1940

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mega et al (US 2004/0169022) in view of Stone (US 2,662,277) or Boetcher et al (US 2,288,433), and Pratt et al (US 5,245,155) or Guo (US 2004/0191064). Mega shows joining two gas turbine components wherein the components (52, 56) are welded temporarily and which is then further welded a YAG laser beam. However, Mega does not show laser powder built-up welding.

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Boetcher or Stone show that it is well known in the art to bring the welding components together and provide an initial welding to hold the components together before filler metals are introduced to complete the welding process. Pratt and Gou show that it is well known in the art to weld gas turbine components with a laser powdered-up welding to join two gas turbine components together. In view of Boetcher or Stone, it would have been obvious to one of ordinary skill in the art to adapt Mega with a filler metal to further weld join two adjoining parts after an auxiliary weld using a laser or electron beam welding, and in view of Pratt or Gou, it would have been obvious to further adapt Mega with a laser powdered up welding as a well known method to provide the filler metals as they are welded via laser to join the turbine components.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mega in view of Stone or Boetcher, and Pratt or Guo as applied to claims 6 and 8 above, and further in view of Baumann (US 2,492,833) or Lysholm (US 2,200,287). Mega in view of Stone or Boetcher, and Pratt or Guo shows the method claimed except for the components comprise at least two rotor discs with an axially extending flange.

Baumann or Lysholm shows gas turbines having rotor discs with axially extending flanges that are welded together. In view of Baumann or Lysholm, it would have been obvious to one of ordinary skill in the art to adapt Mega, as modified by Stone or Boetcher, and Pratt or Guo, with the rotor discs having an axially extending flange as such rotor discs are well known in the gas turbines which allow for alternatively secured attachment to each other.

### **(10) Response to Argument**

The appellant argues Mega does not teach or disclose an auxiliary weld as recited in claim 6. This argument is not deemed persuasive. Mega shows joining at least two gas turbine components (52, 56) such as a tip plug (56) to a blade tip section (52) wherein the tip plug is fit to a hole (55), which is formed in the blade tip section (52), and is welded temporarily according to necessity (see [0032]) which is then followed with another welding operation (see [0036]). The appellant argues that the temporary welding of Mega as applied in the Office Action is based only on a hindsight and on the Applicant's own disclosure, and the appellant also argues that the temporary welding may simply be a pre-weld of the tip plug alone to improve the final weld. The appellant's argument is not deemed persuasive since the temporary welding disclosed in Mega clearly meets the recited step of joining the gas turbine components that is provided as a supplemental to or auxiliary to another subsequent welding operation.

With respect to claim 8, the appellant argues the claim language of claim 8 is not addressed by the Office Action. This argument is not deemed persuasive since it is clearly indicated on page 3, line 6, of the Office Action issued on 9/15/2010, that the auxiliary welding using a laser or electron beam welding as being obvious to one of ordinary skill in the art, which is well known in the art. Boetcher or Stone is applied to show that it is well known to butt-weld or bring the welding components together prior to introducing filler metals, and Boetcher shows that the butt-welding is made by any suitable form of fusion welding including electric arc welding (see Boetcher, page 2,

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lines 15-30). Mega also clearly shows a butt-welding operation by using laser (see [0025]) which is well known in the art. In light of such well known methods, the auxiliary welding produced by laser welding or electron-beam welding would have been obvious to one of ordinary skill in the art as state in the office action.

With respect to claim 9 and 10, the appellant argues it would not have been obvious to apply the teachings of Meg, as modified by Stone or Boetcher, and Pratt or Guo, since Meg is for a repair method only and is not applicable to the flanges as recited in claims 9 and 10. This argument is not deemed persuasive since Meg as well as Bauman or Lysholm, which is applied to show the claimed flange, is in the same field of endeavor, relating to the welding of the turbines or rotors components, it would have been obvious to combine the teachings of Mega, as modified by Stone or Boetcher, and Pratt or Guo, to other turbine components including that of the extending flanges as recited in claim 9 and 10. Furthermore, the recited pool crater as recite claim 11, which is form by the extending flanges, is clearly illustrated in the drawing figures of Baumann or Lysholm.

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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/SANG Y PAIK/

Primary Examiner, Art Unit 3742

Conferees:

/TU B HOANG/

Supervisory Patent Examiner, Art Unit 3742

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